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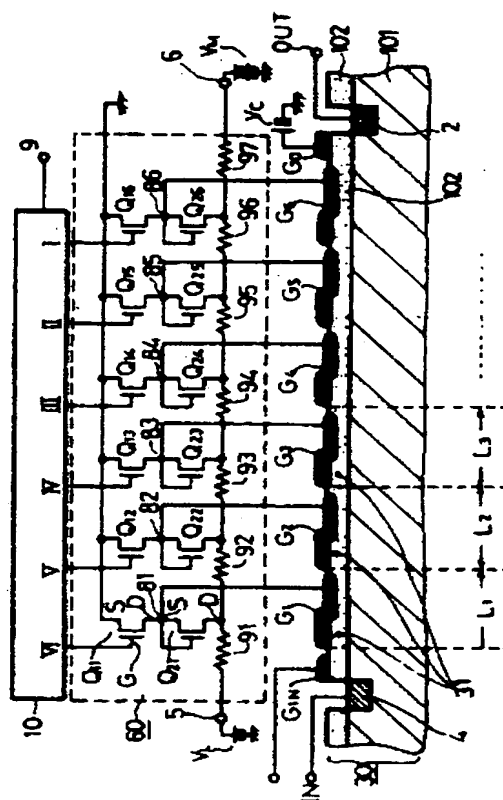
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APPLICANT : FUJITSU LTD;

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TITLE : CHARGE TRANSFER DEVICE



ABSTRACT : **PURPOSE:** To make the depth of each well correspond to the quantity of stored charge by a method wherein when the transferring electrodes are provided on the surface of a semiconductor substrate through an insulating film and voltage is applied to them to transfer the charge, the further the electrode position is backward in the transfer direction, the higher the voltage level is applied to it.

CONSTITUTION: The insulating film 102 is provided on the P-type semiconductor substrate 101, apertures are made at both end parts of the film, and the input and output diodes 4, 2 are formed by the diffusion method. Also plural transferring electrodes G_1 - G_6 are mounted on the film 102 that is located between both apertures 4, 2, the input and output gate electrodes G_{IN} , G_0 are provided to both end parts of said film 102 to make up the time delay integration type CCD element 30. In this configuration, when a driving voltage is applied to the respective electrodes G_1 - G_6 , a higher voltage is applied to the electrode the further the electrode is located backward in the transfer direction by means of the shift resistor 10 and the driver 60. The driver 60 is composed of the voltage divider circuit, in which the resistances 91-97 are connected to each other in series, and N channel enhancement type switching and depletion type loading MOS transistors Q_{11} - Q_{16} and Q_{21} - Q_{26} .

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SEARCH REPORT